



Campbell's

Managing Wide Open Spaces

CHALLENGE

Large cavernous manufacturing centers withstand complexities with voluminous staff, high traffic, inconsistent climate control, and ongoing pressure to create productive working environments so output goals are reached month after month. The Campbell Soup Company, one of the largest international food companies with products in 120 countries, operates a sprawling, 2.4 million-sq.-ft. facility on a 949-acre parcel that hugs the Maumee River in Ohio.

The plant, recognized as Food Processing Magazine's 2014 Green Plant of the Year, is a thermal processing powerhouse cranking out 107 million cases of soups, juices, beverages and sauces annually. With a collection of exterior doors continually introducing outside air into the space, facility managers were deploying propeller-based fans in an attempt to create an air barrier to the unwanted airflow they blamed for drafts and shrinking productivity. The fans were doubly ineffective because they relied on excessively high horsepower to produce a wide projection of diffused air. The fans were simply spreading an unfocused blast of air using an excessive amount of energy.

THE SOLUTION

The Mars Air Systems air curtain solution was able to produce a precision air barrier with a concentrated blast of air that used only three (3) total horse power versus the excessive 15 hp found in the ineffective collection of fans. With a proven ability to predictably and consistently stop air transfer and an energy consumption five times smaller than that of the fans, the Mars solution consumes the energy equivalency of one standard metal parking light with a 1500-watt metal halide bulb turned on for one hour. The doorway-affixed air curtain also completely eliminated the view obstruction of the fans.

STUDIES REVEAL A 6%-9% UPSIDE EFFECT ON WORK PERFORMANCE BASED ON IMPROVED AIR QUALITY AND TEMPERATURE. (WYON 2004)



PRODUCING NON-TRADITIONAL SOLUTIONS

For high-value product manufacturers, controlling the manufacturing environment and atmosphere within a narrow degree of variability means saving tens of thousands of dollars eliminating defects. Both Subaru of America and a BMW-contractor, TW Fitting NA, LLC, used the Mars Air Systems air curtain to deliver a superior non-traditional solution for their manufacturing challenges. The Mars Engineering team's solution helped prep the tires TW Fitting NA prepares for BMW vehicles by simply suspending nine electrically-heated air curtains over the tire conveyor belt. The solution enabled the tires to be heated just enough to create a more pliable rubber and eliminate the splitting, beading and rim damage which occurred when the rubber was colder. The Mars solution then did its part to lower energy costs by eliminating the need for an energy-gulping and unwieldy liquid-propane solution. Similarly, when Subaru needed near-pristine atmospheric conditions for their paint booths, five separate Mars air curtains were installed in the hallway paint room entryway to act as an "air shower" for workers. Using the sequence of units, the Mars team was able to virtually eliminate dust and hair from the worker's clothing so particles could no longer mar the painted finish.



PUTTING THE SKIDS ON SLIPPERY

Campbell Soup Company, one of the largest food companies in the world, operates a sprawling, 2.4 million-sq.-ft. facility on a 949-acre parcel, which includes operating a cooler/freezer storage unit 24 hours/day alongside a 8'x16' heavily trafficked forklift entrance with a fast-acting vertical-lift door. The hot, humid warehouse conditions collide with the cold, dry-storage area air which produces condensation and pools of water at the base of the freezer -- both inside and out. Water also flowed from the freezer opening directly into the walkways that hosted both foot and forklift traffic. The Mars Air Systems Engineering team isolated the precise area that needed an air burst then installed a bundle of door-activated air curtains and air diffusers right at the forklift entrance. The air curtain's forced-air action stabilized cold area temperatures by creating an air seal which effectively evaporated most surface condensation and eliminated pools of water in the walkway.



TOP CHAINS ORDER UP PEAK PERFORMERS

While a Health Department code may prescribe air curtains to create cleaner, pest-free food prep areas, the real mandate comes from patrons. Creating a pest-free space with evenly distributed conditioned air does more than give guests the impression of clean, it's actually a building block to designing a truly hygienic venue. Food poisoning is directly linked to flies who carry pathogenic organisms that cause E. coli, salmonella and shingles and introduce other bacteria. Working hand in hand with the sanitation protocols you already have, Mars Air Systems' air curtains above entry doors, pass through windows and back receiving doors becomes a silent sentry that seizes control to keep the uninvited out. And, we've been doing that for over 50 years for iconic hospitality brands such as Panda Express, In-N-Out Burger, Taco Bell, Subway, Olive Garden and growing up-and-comers like Smashburger and Five Guys Burgers. Whether it's the need for a recessed unit that blends seamlessly in a well-defined décor vision, or defense against brutal weather conditions -- both hot and cold -- or the need for food storage areas to be vigorously defended Mars products have been the solution of choice for the most demanding operators world-wide.



TOO MANY PEOPLE NEED US – IT HAS TO BE RIGHT

When you're as successful as Westmoreland County Food Bank because you serve 7,200 families a month and operate a 40,000 sq.ft. facility that processes 8.6 million pounds of food a year, your food storage equipment needs to work flawlessly. For Westmoreland, facility limitations forced the freezer and evaporator to sit side-by-side which led to a healthy dose of humidity leading to ice and frost on the floor outside the freezer doorway -- a safety hazard for both forklifts and workers on foot. When it's too important or costly to be anything other than right, Mars Air Systems is the team you want on your side. Mars has been repeatedly the source for answers when large industrial and foodservice operators need no-fail solutions to vexing humidity, unwanted condensation or accident-provoking pools of water. Deploying air baffles to ride shotgun along side the series of air curtains gave the Westmoreland workers the means to ward off the flowing water that had been a source of slippage, falls and worker injury.